# SERVICE MANUAL

# RC430

REMOTE CONTROL RMC-12

marantz®

## model RC430

model RMC-12

*Remote Control Receiver*

## MARANTZ DESIGN AND SERVICE

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EUROPEAN PARTS DEPARTMENT
2, Avenue Léopold III
B-7120 PERONNES-lez-BINCHE
BELGIUM
TWX: 57589 SEPLT B

SUPERSCOPE NATIONAL PARTS DEPARTMENT
20525 Nordhoff Street
Chatsworth, California 91311
Phone: 1-800-423-5108
Phone: 1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

### PARTS ORDERING:

Parts may be ordered from the following addresses:

#### EUROPE

**MARANTZ S.A.**
European Parts Department
2, Avenue Léopold III
B-7120 Péronnes-lez-Binche
Belgium
Telex: 57589

**MARANTZ GERMANY GMBH**
Max Planckstrasse, 22
6072 DREIEICH 1
West Germany
Telex: 4185316

**MARANTZ FRANCE**
4 Rue Bernard Palissy
92600 Asnières
France
Telex: 611651

**MARANTZ DENMARK**
Bregnerødvej 132b
3460 Birkerød
Denmark
Telex: 39137

**MARANTZ GMBH AUSTRIA**
Wiedner Hauptstrasse 98
1050 Wien
Austria
Telex: 113583

**MARANTZ S.A.**
326 Avenue Louise Bte 32
1050 Brussels
Belgium
Telex: 26602

**MARANTZ NORSKE A.S.**
Refstadalleen 13
Oslo 5
Norway
Telex: 19659

**MARANTZ AUDIO U.K. LTD.**
Unit 15/16
Saxon Way Industrial Estate
Moor Lane
Harmondsworth UB7 OLW
Great Britain
Telex: 935196

**MARANTZ BELGIUM**
45 Rue Auguste Van Zande
1080 Brussels
Belgium

**MARANTZ SVENSKA A.B.**
Svartviksvangen 56
Traneberg - Box 12016
16112 Bromma
Sweden
Telex: 13449

#### AUSTRALIA

**MARANTZ AUSTRALIA PTY., LTD.**
32 Cross Street
Brookvale, N.S.W. 2100
Australia
Telex: 24121

#### U.S.A.

**MARANTZ COMPANY, INC.**
National Service Dept.
P.O. Box 577
Chatsworth, CA 91311
U.S.A.
Telex: 4720284

#### CANADA

**SUPERSCOPE CANADA, LTD.**
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

#### JAPAN

**MARANTZ JAPAN, INC.**
35-1, 7-chome, Sagamiono
Sagamihara-shi, Kanagawa
Japan
Telex: 22878

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

> In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

### NOTE—FOR U.S.A. ONLY

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If, for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from SUPERSCOPE NATIONAL PARTS DEPARTMENT.

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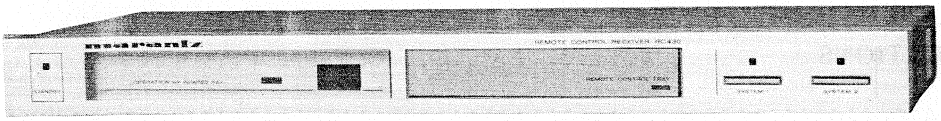
## TECHNICAL SPECIFICATIONS

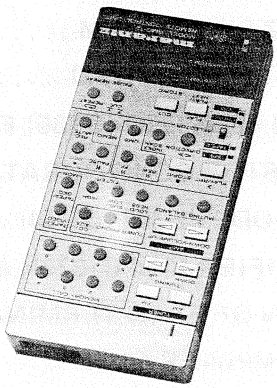
| | |
|---|---|
| Power Requirement | AC 110–120V/220–240V, 50/60 Hz |
| Power Consumption | 5W |
| Outlet Rating | System 1, 250W Max.<br>System 2, 250W Max. |
| Dimensions (W x H x D) | 416 x 45 x 192 mm |
| Weight | 1.8 kg |

**Model RMC-12**

| | |
|---|---|
| Dimensions (W x H x D) | 74 x 18 x 152 mm |
| Weight | 95g (without battery) |

# MODEL RC430 REMOTE CONTROL RECEIVER/RMC-12 REMOTE CONTROL UNIT





MODEL RMC-12

## INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model RC430 Remote Control Receiver.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

## 1. SHOCK, FIRE HAZARD SERVICE TEST

**CAUTION:** After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before return to user/customer.

Ref. UL Standard No. 1270. Para. 66. 3. D (Mandatory Test after servicing Electrical Appliances, effective 7-1-83).

## 2. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model RC430 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Remote Control/
   Power Supply . . . . . mounted on P.W. Board PU01
2. Power LED . . . . . mounted on P.W. Board PZ01
3. LED Switch . . . . . mounted on P.W. Board PY01
4. Remote Output Jack . . . mounted on P.W. Board PW01
5. AU Contact Dual . . . . . mounted on P.W. Board PT00 (RMC-12)

## 3. MARANTZ BUS SYSTEM

The digital control system is upgraded to permit easy operation of functions, components in efficient configuration without any misoperation.

- **MARANTZ Bus System**

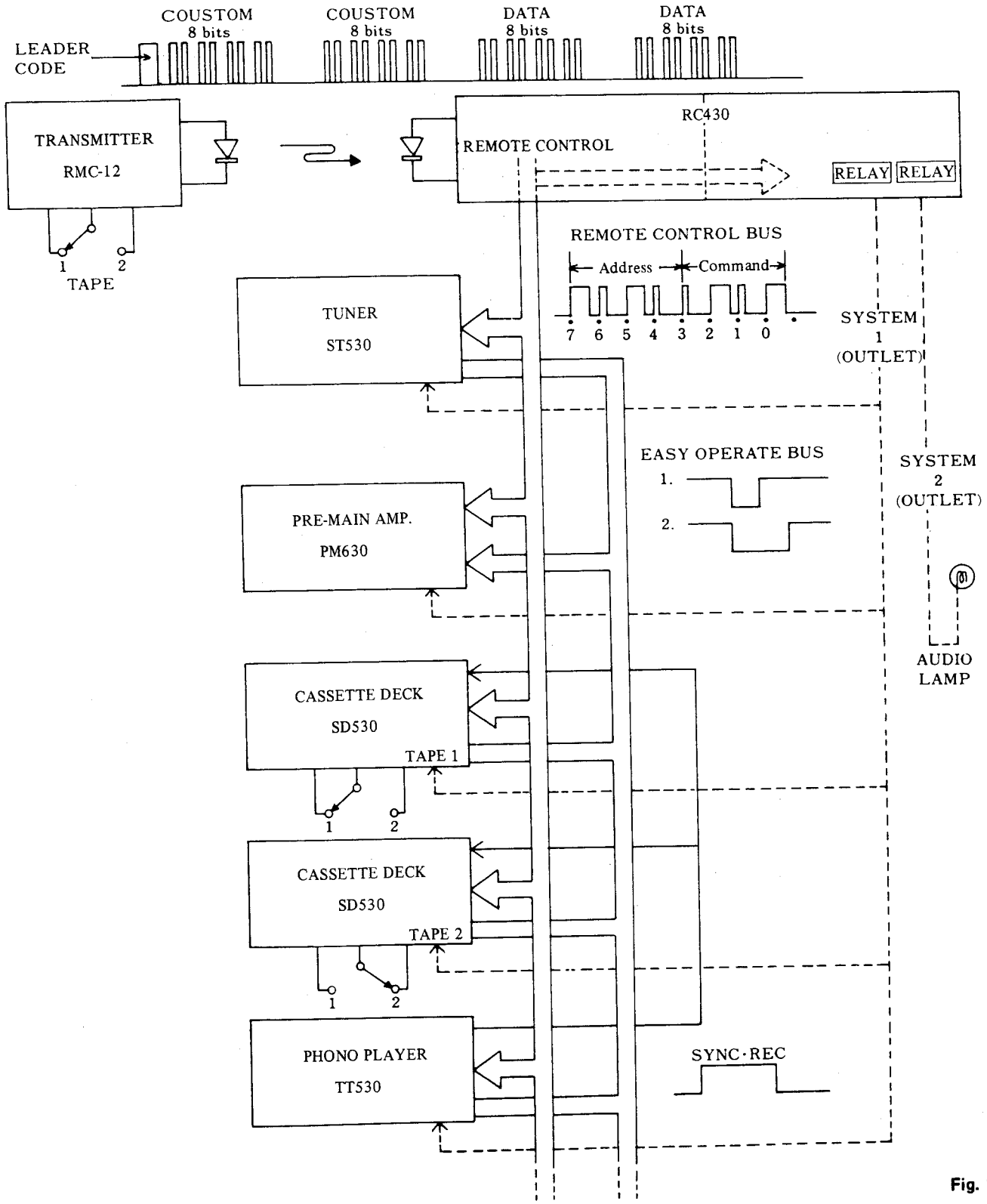



**Fig. 1**

Fig. 1 shows the signal system between components where the MARANTZ bus system is mounted.

## 4. TRANSMITTER (RMC-12)

Pulse codes of 32 bits are transmitted using an infrared ray for a carrier. The misoperation-free C-MOS LSI μPD6102G (QT05), operated with minimal battery power consumption, is employed for pulse codes.

- Key inputs of each function are as shown in Table 1 Key Allocation.

- **Key Allocation in μPD6102G**

| CCS | 0 or 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | |
|---|---|---|---|---|---|---|---|---|---|
| IN \ OUT | K00 | K01 | K02 | K03 | K04 | K05 | K06 | K07 | |
| K10 | AM | 2 | 6 | DOWN (TUNING) | INDEX SCAN | PAUSE | | | Double Key-in |
| K11 | FM | 3 | 7 | | REW | PLAY/ RPT | DIRECTION | | Double Key-in |
| K12 | | 4 | 8 | | FF | REC | Q.M.S. | POWER SYSTEM 1 | Double Key-in |
| K13 | 1 | 5 | UP (TUNING) | MEMORY | STOP/C | REC MUTE | | SYSTEM 2 | |
| K14 | UP (VOL) | LOW (FILTER) | | | | | CUT | | |
| K15 | DOWN (VOL) | | | TUNER | MUTE | PLAY | CUE | REPEAT | |
| K16 | LOUDNESS | TAPE 1/ VIDEO (MONITOR) | | | TAPE 2/ GEQ (MONITOR) | | | | |
| K17 | HIGH (FILTER) | | BALANCE | PHONO | CD/AUX | | | | |

TUNER: AM, 2, 6, DOWN (TUNING), FM, 3, 7, 4, 8, 1, 5, UP (TUNING), MEMORY
DECK: INDEX SCAN, PAUSE, REW, PLAY/ RPT, DIRECTION, FF, REC, Q.M.S., STOP/C, REC MUTE
POWER SYSTEM 1: SYSTEM 2
PRE-MAIN AMP.: UP (VOL), LOW (FILTER), DOWN (VOL), TUNER, MUTE, LOUDNESS, TAPE 1/ VIDEO (MONITOR), TAPE 2/ GEQ (MONITOR), HIGH (FILTER), BALANCE, PHONO, CD/AUX
PHONO/CD: CUT, PLAY, CUE, REPEAT

**Table 1**

- The pulse position modulation system (PPM) is introduced as shown in Fig. 2 for remote-control infrared-ray output waveforms to discriminate 1 from 0 with a duration between pulses.

Each of custom codes and data codes consists of 8 bits. Inverted codes are also transmitted in the system to minimize misoperation.

- **Remote Output Waveform**

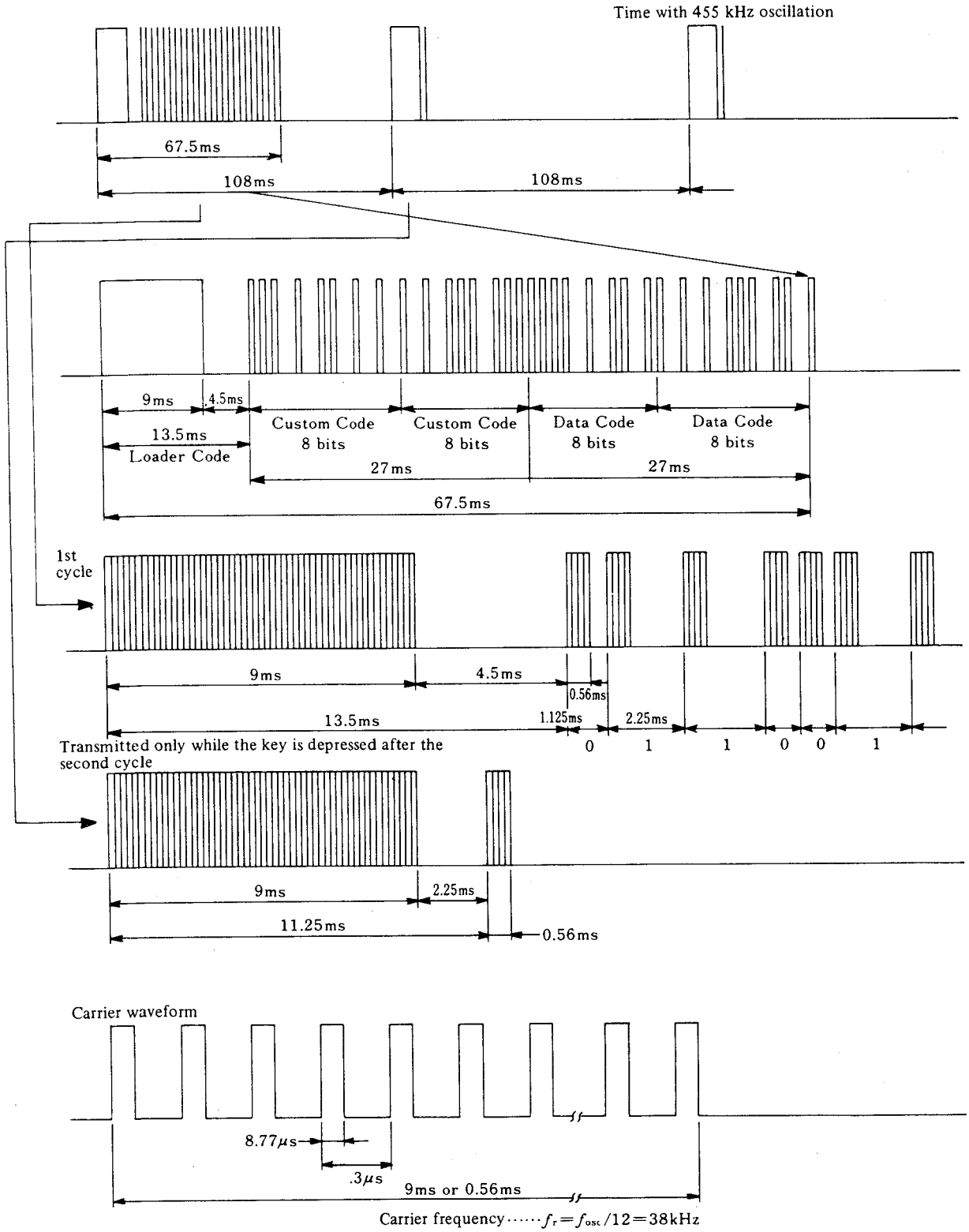
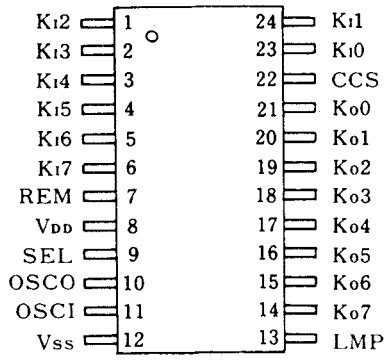



**Fig. 2**

## 5. C-MOS LSI μPD6102G (QT05) FOR REMOTE CONTROL

- **Pin Connection** (Top View)




1. KI2 ····· Key Input 2
2. KI3 ····· Key Input 3
3. KI4 ····· Key Input 4
4. KI5 ····· Key Input 5
5. KI6 ····· Key Input 6
6. KI7 ····· Key Input 7
7. REM ····· Remote Output
8. VDD ····· Power terminal
9. SEL ····· 64/128 Data Select
10. OSCO ····· Oscillator Output
11. OSCI ····· Oscillator Input
12. Vss
13. LMP ····· Lamp Output
14. KO7 ····· Key Output 7
15. KO6 ····· Key Output 6
16. KO5 ····· Key Output 5
17. KO4 ····· Key Output 4
18. KO3 ····· Key Output 3
19. KO2 ····· Key Output 2
20. KO1 ····· Key Output 1
21. KO0 ····· Key Output 0
22. CCS ····· Custom Code Select Input
23. KI0 ····· Key Input 0
24. KI1 ····· Key Input 1

- **Absolute Max. Ratings** (Ta = 25°C)

| Item | Symbol | Limite | Unit |
|---|---|---|---|
| Supply voltage | $V_{DD} - V_{SS}$ | 4.0 | V |
| Input voltage | $V_{IN} - V_{SS}$ | −0.3 ~ $V_{DD}$ | V |
| Output voltage | $I_{OH}$ (REM, LMP) | −15.0 | mA |
| Power dissipation | Pd | 250 | mW |
| Operating temperature | Topt | −20 ~ +75 | °C |
| Retention temperature | Tstg | −40 ~ +125 | °C |

- **Recommended Operating Range**

| Item | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| Supply voltage | $V_{DD}$ | 2.0 | 3.0 | 3.3 | V |
| Oscillation frequency | fOSC | 400 | 455 | 500 | kHz |
| Indicator lamp output current | $I_{OL}$ (LMP) | | 1 | | mA |

- **Electrical Characteristics** (Ta = 25°C, $V_{DD}$ = 3.0V)

| Item | Symbol | Measuring Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Supply current | $I_{DD}$ (OP) | fOSC = 455 kHz | | 0.1 | 1.0 | mA |
| Supply current | $I_{DD}$ (ST) | fOSC = STOP | | | 1 | μA |
| High-level input voltage | $V_{IH}$ (KI) | | 0.7$V_{DD}$ | | $V_{DD}$ | V |
| Low-level input voltage | $V_{IL}$ (KI) | | 0 | | 0.3$V_{DD}$ | V |
| Input pull-down resistance | R (KI) | | 150 | 300 | 600 | kΩ |
| Output voltage | $I_{OH}$ (REM) | $V_{OH}$ (REM) = 1.5V | −5 | −13 | | mA |
| Low-level output voltage | $V_{OL}$ (LMP) | $I_{OL}$ = 1.0 mA | | 0.17 | 0.3 | V |

A custom code is determined as shown in Fig. 3 by diodes DT01 to DT04.

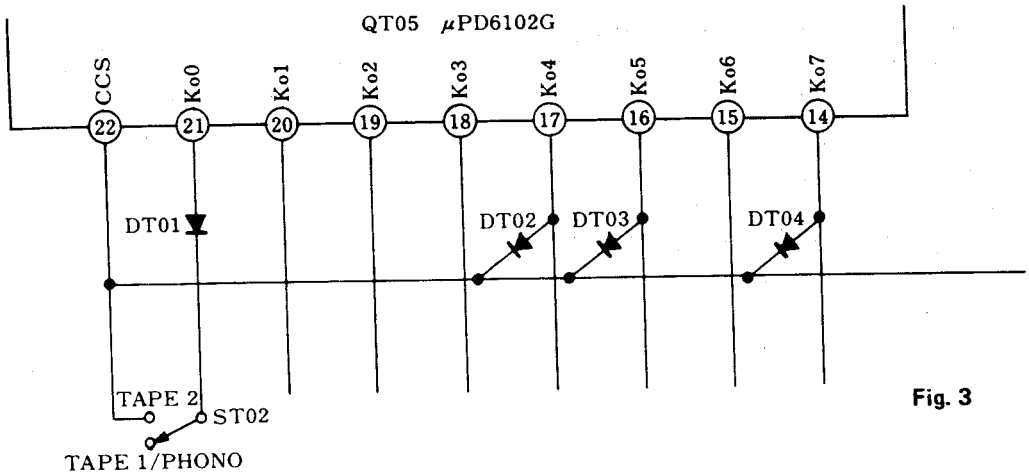


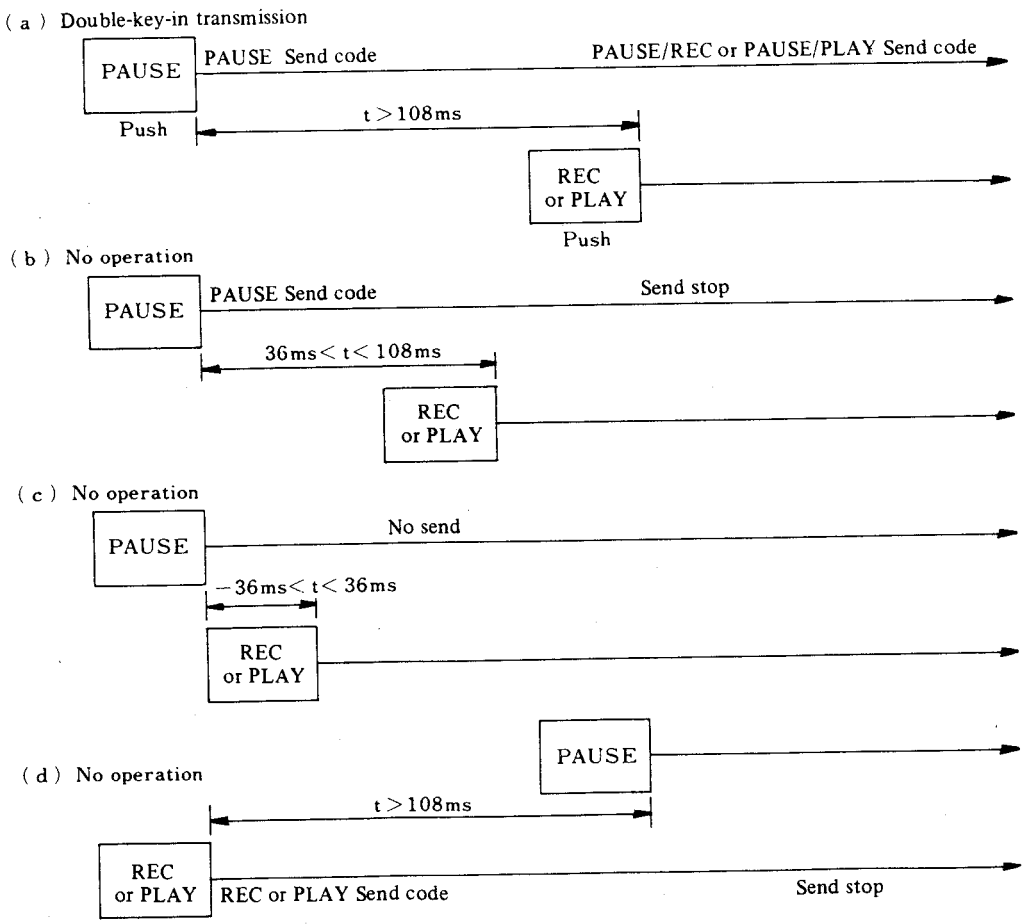

Fig. 3

The ST02 is used to control two decks (SD530) by switching a custom code with the on/off actions of the ST02. The TAPE 1 and PHONO functions are operated in the off state. (In that case, either selected by the TAPE 1 – TAPE 2 selector switch on the rear panel of the Deck (SD530) is operable.)

- **Double-key-in Operation**

The double-key-in block circuit is provided in all keys to prevent double transmission of the same or different code. When the PAUSE and PLAY keys or the PAUSE and REC keys are depressed, a special data code is offered to effectively perform control of functions in the Deck (SD530). Priority is given to key-in. This mode is set only when PLAY or REC is keyed in 108 ms after depression of PAUSE. The order of releasing the two keys does not concern the mode.

- **Double-key-in Operation Timing**



## 6. RC430 SYSTEM CONFIGURATION

The transmitted infrared ray is detected by photo-diode PH302 (QU14) behind the light detecting inlet and then led to the next preamplifier IC $\mu$PC1373H (QU13). The IC amplifier, used only for the infrared ray, detects and amplifies a weak signal from the photo-diode to a logic level. The IC is therefore shielded since it tends to be affected by external noise. The detected output is decoded to a pulse width modulation signal (PWM) of 8 bits, and sent out from jack JW01 (RCA pin jack) on the rear panel to each component.
The signal is also sent to microcomputer $\mu$COM43 (QT09) for the timer to drive the power switch control relays in the systems 1 and 2.

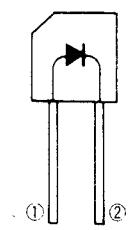
## 7. PHOTO-DIODE PH302 (QU14)

The photo-diode is used only for remote control. It has a large photo-detecting area and allows a high-speed response. It matches the infrared-ray LED in maximum sensitivity wavelength, which is approx. 940 mm.

- **Absolute Maximum Ratings** (Ta = 25°C)

| Item | Symbol | Limit | Unit |
|---|---|---|---|
| inverse voltage | $V_R$ | 32 | V |
| Power dissipation | $P_D$ | 150 | mW |
| Junction temperature | $T_j$ | 80 | °C |
| Retention temperature | $T_{stg}$ | −40 to +80 | °C |

- **Connection Diagram**




- **Electrical Characteristics** (Ta = 25°C)

| Item | Symbol | Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Dark current | $I_R$ | $V_R$ = 10V | | | 30 | nA |
| Max. sensitivity wavelength | $\lambda$max. | | | 940 | | nm |
| Quantum efficiency | $\eta$ | $\lambda$ = 940 nm | | 0.88 | | |
| Sensitivity | S | $V_R$ = 5V | 35 | 50 | | nA/lx |
| Energetic sensitivity | S | $\lambda$ = 940 nm | | 0.6 | | A/W |
| Voltage under no load | $V_L$ | $E_V$ = 100 lx | | 285 | | mV |
| Voltage under no load | $V_L$ | $E_V$ = 1000 lx | | 365 | | mV |
| Rise time | $t_r$, $t_f$ | $R_L$ = 1 kΩ, $V_R$ = 0, $\lambda$ = 940 nm | | 125 | | ns |
| Fall time | $t_r$, $t_f$ | $R_L$ = 1 kΩ, $V_R$ = 5V, $\lambda$ = 940 nm | | 50 | | ns |
| Inter-pin capacitance | $C_t$ | $V_R$ = 5V, f = 1 MHz | | 14 | | pF |
| Photo-detecting area | A | | | 9 | | $mm^2$ |
| Equivalent noise wattage | NEP | $V_R$ = 10V | | $4.2 \times 10^{-14}$ | | $W/\sqrt{Hz}$ |
| Detecting limit | D | | | $6.6 \times 10^{-12}$ | | $cm\sqrt{Hz}/W$ |

## 8. PREAMPLIFIER IC μPC1373H (QU13)

The IC is a receive-only preamplifier in the infrared-ray remote-control system. High-gain amplifier, peak detector and output shaping circuits required for a receiving pre-amplifier are built in one chip.

- **Absolute Maximum Ratings** (Ta = 25°C)

| Item | Symbol | Limit | Unit |
|---|---|---|---|
| Supply voltage | $V_{DD} - V_{SS}$ | 15.0 | V |
| Power dissipation | Pd | 270 | mW |
| Operating temperature | Topt | −20 ~ +75 | °C |
| Retention temperature | Tstg | −40 ~ +125 | °C |

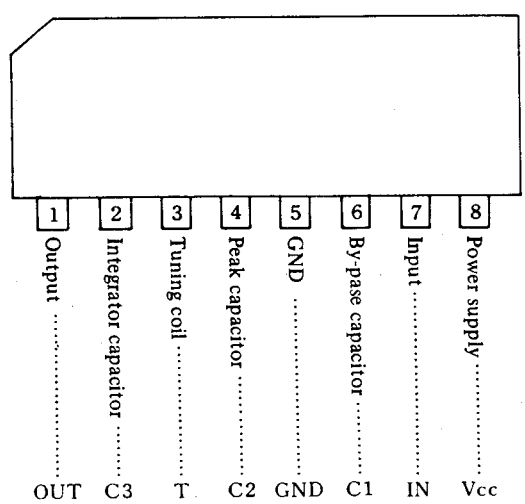
- **Recommended Operating Conditions**

| Item | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| Supply voltage | $V_{DD}$ | 6.0 | 8.5 | 14.4 | V |
| Frequency | $f_{OSC}$ | 30 | | 50 | kHz |

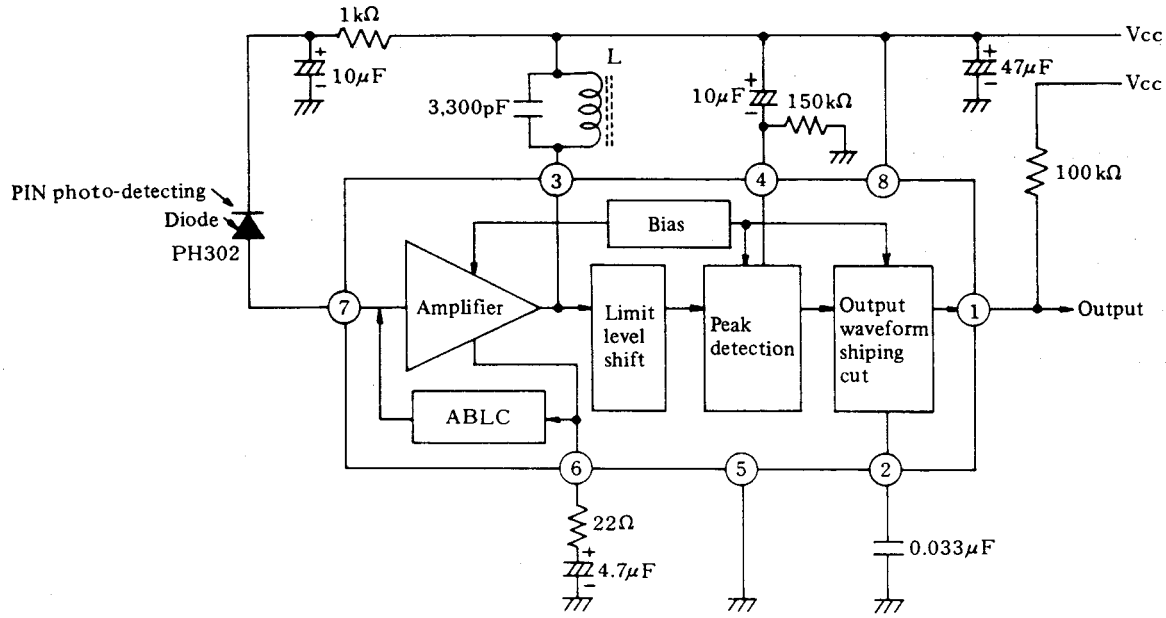
- **Electrical Characteristics** (Ta = 25°C, $V_{CC}$ = 8.5V, $f_{in}$ = 40 kHz)

| Item | Symbol | Measuring Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Supply current | $I_{CC}$ | | 1.5 | 2.5 | 3.5 | mA |
| Input terminal voltage | $V_{in}$ 1 | | 2.1 | 2.6 | 3.1 | V |
| Input terminal voltage | $V_{in}$ 2 | $I_{in}$ = 70 μA | 3.4 | 4.1 | 4.9 | V |
| First stage voltage gain | $A_{VL}$ | #7 − #3, $v_{out}$ = 500 mVp-p | | 60 | | dB |
| Detecting sensitivity | $v_{in}$ | | | 50 | 100 | μV |
| Internal input resistance | $r_{in}$ | | 40 | 60 | 80 | kΩ |
| Output voltage | $V_{OL}$ | $I_{OL}$ = 0.1 mA, $v_{in}$ = 1 mVp-p | | | 0.5 | V |
| Putput leak current | $I_{OH}$ | $V_{OH}$ = 14.4V | | | 2 | μA |

- **Connection Diagram**



- **Example of Basic Circuit**




## 9. FUNCTION OF EACH TERMINAL

**Pin (7), input terminal**
Internal impedance is approx. 60 kΩ. It is connected directly to photo-diode QU14. The automatic bias level control (ABLC) circuit is inserted into the input stage to prevent the input terminal from saturation due to external light. If the input terminal is exposed to intensive external light, the circuit operates to clamp the bias level of the input terminal.

**Pin (4), peak capacitor (CU22) and peak detecting sensitivity resistor (RU36)**
The pin detects a waveform of the tuning coil in accordance with a peak of signal to input through the peak detector circuit.
For that reason, noise-free signal is detected during receiving since the detecting level is in the highest sensitivity in the quiescent state and varies with an input level. The time constant of peak hold can be changed with a value of CU22. Peak detecting sensitivity is determined with a value of RU36.

**Pin (3), tuning coil (LU03)**
Tuned with a carrier sent from the transmitter by adjusting LU03. A carrier frequency of the transmitter RMC-12 is 37.5 kHz.

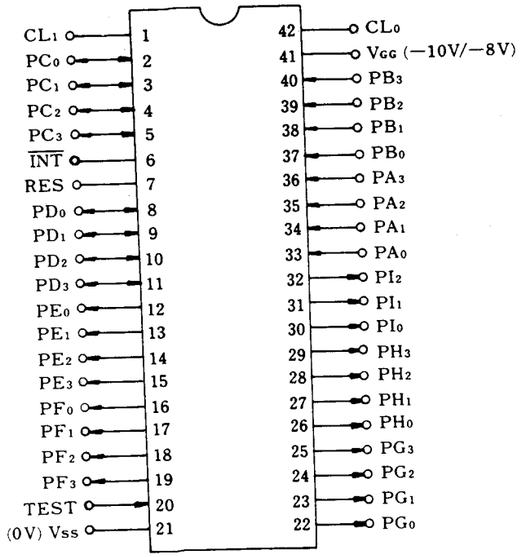
**Pin (2), integration capacitor (CU21)**
A carrier waveform after peak detection is integrated in the capacitor. The reset time constant is determined by this capacitor and external resistor RU37 of pin (1), output terminal.

## 10. MICROCOMPUTER QU12

One-chip 4-bit microcomputer. It is a P-channel, 42-pin MOS prastic dip type. It is a key station on which the MARANTZ bus system depends, and is a MARANTZ's original product.

Pin (33) is an input terminal that receives output of pre-amplifier QU13.
Pin (12) is an output terminal of a remote control bus and has the high level with signal received.
Pin (13) is an eye indicator output terminal and has the high level with signal received. However, the pin is set to the high level at a moment in PAUSE mode.
Pin (7) is a reset terminal in the on state of power supply. It is driven by QU05. QU12 is reset with change from high to low level. Therefore, rising and falling time constants of QU12 on 10V and those of the collector in the QU05 on power supply must be appropriately selected to allow exact operation in any mode when the ac plug of the timer is inserted into the receptacle.
On DC power supply of the QU05, the time constants are determined by the RU02 and the CU03, so that a value being as small as 0.1 μF is selected for the CU13.
A time constant that turns on the QU05 is determined by the RU16 (560 kΩ) and the CU07 (10 μF), and is larger than the time constant on 10V. The CU07 is discharged by diode DU10 with the AC plug disconnected (or in power failure).

● **Pin Connection Pattern** (Top View)




● **Pin Name**

$CL_{0,1}$ : Clock signal oscillation, external
$\overline{INT}$ : Interrupt
RES : Reset
$PA_{3\sim0}$ : Input port $A_{3\sim0}$
$PB_{3\sim0}$ : Input port $B_{3\sim0}$
$PC_{3\sim0}$ : I/O port $C_{3\sim0}$
$PD_{3\sim0}$ : I/O port $D_{3\sim0}$
$PE_{3\sim0}$ : Output port $E_{3\sim0}$
$PF_{3\sim0}$ : Output port $F_{3\sim0}$
$PG_{3\sim0}$ : Output port $G_{3\sim0}$
$PH_{3\sim0}$ : Output port $H_{3\sim0}$
$PI_{2\sim0}$ : Output port $I_{2\sim0}$
TEST : Test

## 11. SIGNAL PROCESSING OF MARANTZ BUS SYSTEM

This system features to permit control of every type of component through a single cable, help easy upgrade of the system and multiplex the control function. A code corresponds to each component and its function. The waveform can be directly observed on the storage oscilloscope. An address of 4 bits specifies each component while a command of 4 bits determines the function of the component.



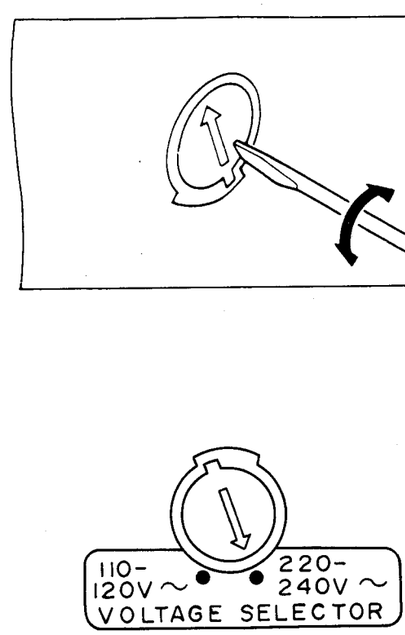
## 12. VOLTAGE CONVERSION

● **EUROPEAN MODEL ONLY**

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

**CAUTION**
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

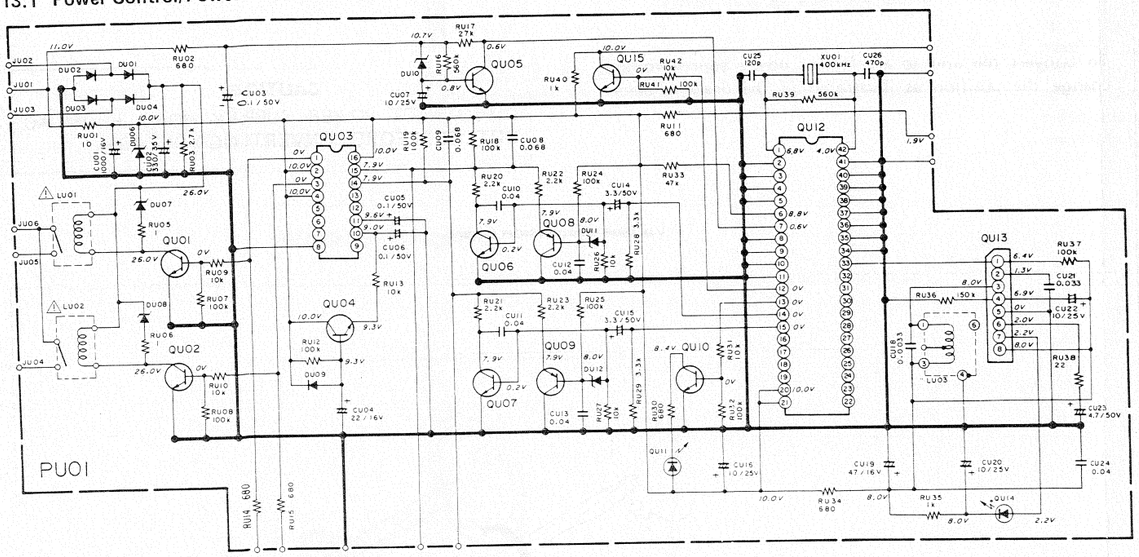
**Voltage Conversion Chart**



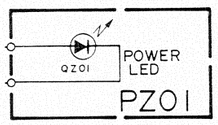

**Note on safety:** Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠ Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

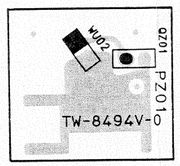
# 13. DIAGRAM AND COMPONENT LOCATIONS

## 13.1 Power Control/Power Switch (PU01) Schematic Diagram and Component Locations

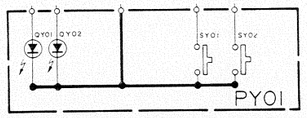


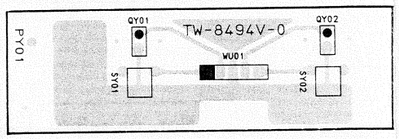

## 13.2 LED (PZ01) Schematic Diagram and Component Locations



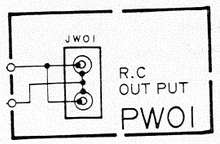



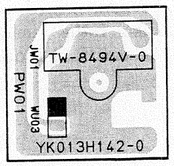

## 13.3 LED Switch (PY01) Schematic Diagram and Component Locations



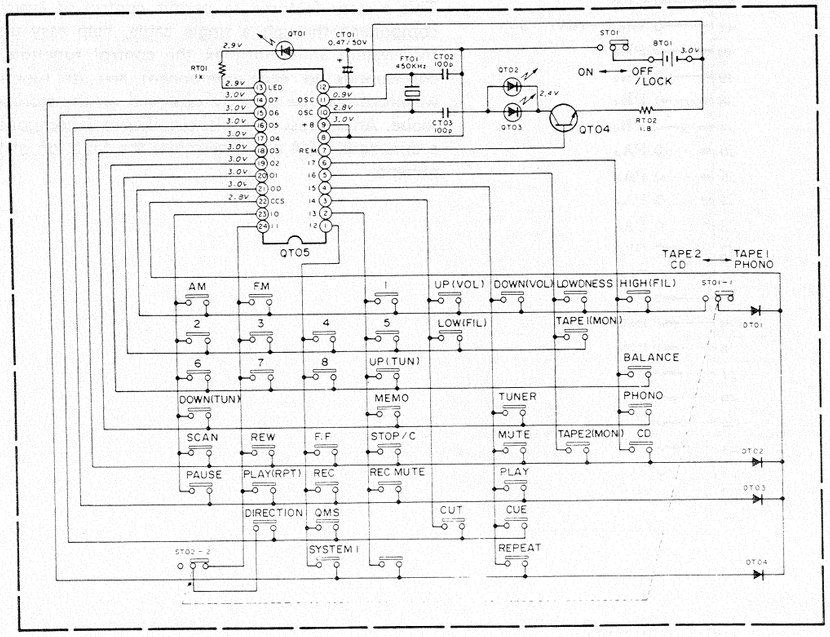

## 13.4 Remote Output Jack (PW01) Schematic Diagram and Component Locations

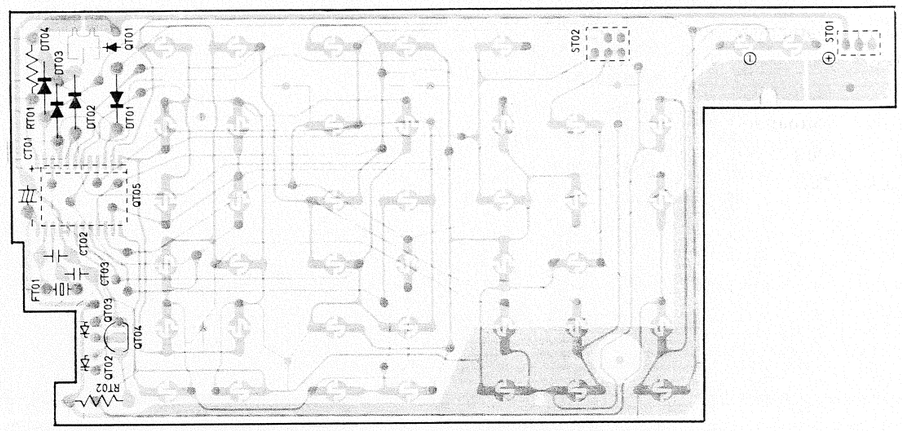




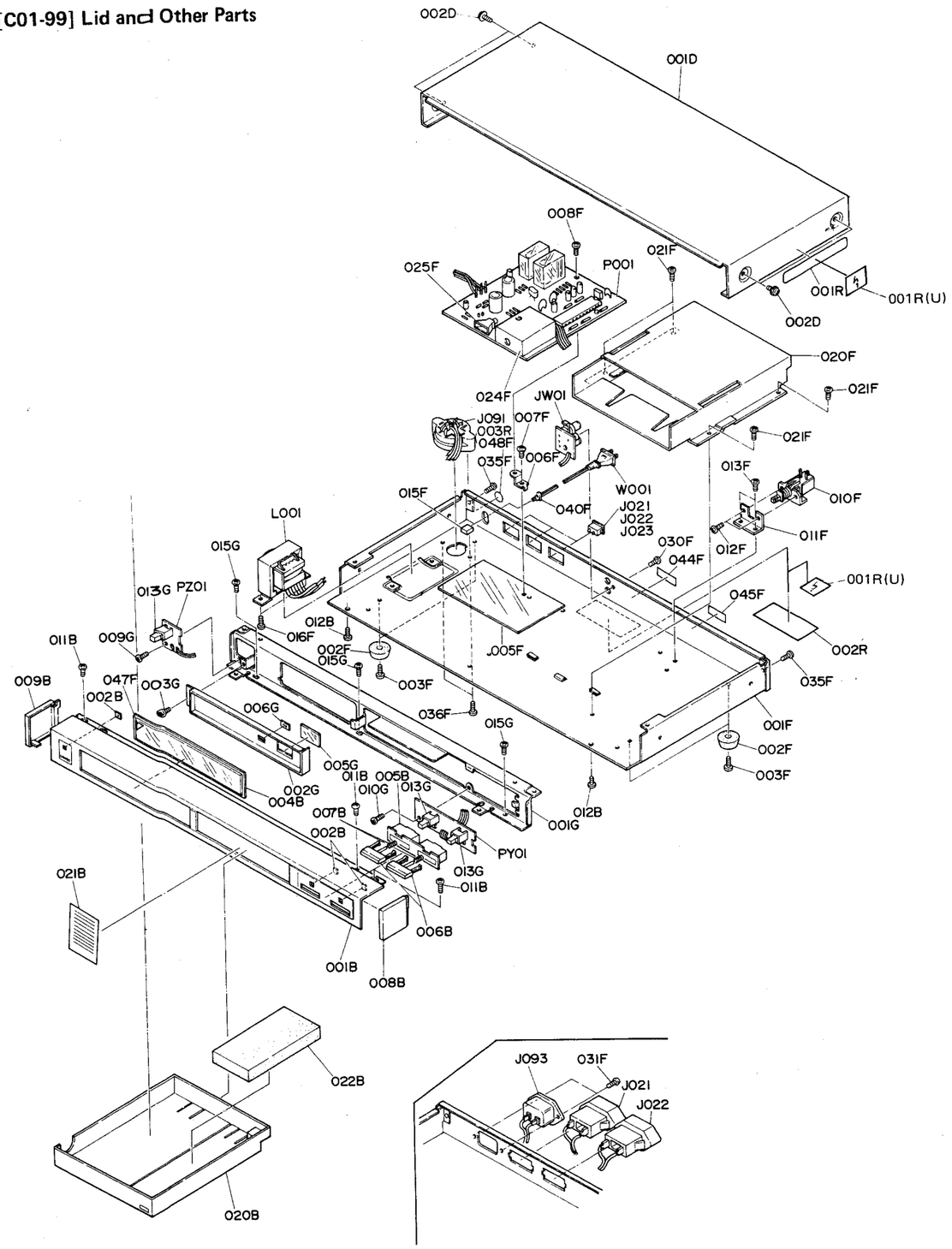

# 14. REMOTE CONTROL (RMC-12) SCHEMATIC DIAGRAM AND COMPONENT LOCATION



## 15. EXPLODED VIEW AND PARTS LIST

### [C01-99] Lid and Other Parts

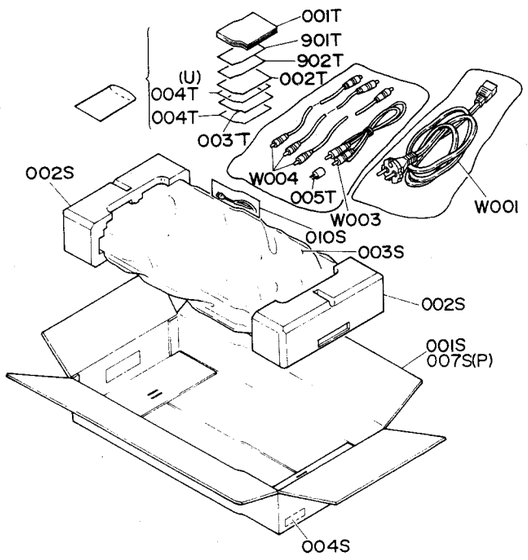


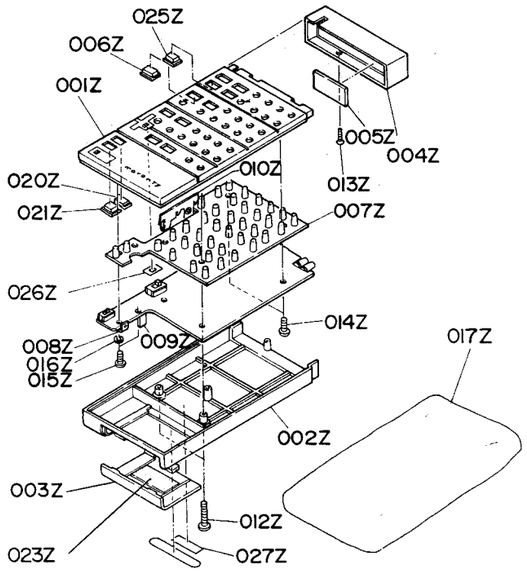



| REF. DESIG. | Q'TY U | N | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|
| A | 1 | 1 | 1 | 1 | 013H063400 | Front Panel Assembly |
| 001B | 1 | 1 | 1 | 1 | 013H063010 | Escutcheon, Front Panel |
| 002B | 3 | 3 | 3 | 3 | 125H158010 | Window, L.E.D. |
| 004B | 1 | 1 | 1 | 1 | 013H158010 | Window, Operation |
| 005B | 1 | 1 | 1 | 1 | 013H259010 | Bushing, System 1/2 |
| 006B | 2 | 2 | 2 | 2 | 431H154010 | Knob, System 1/2 |
| 007B | 2 | 2 | 2 | 2 | 132T115010 | Spring, Knob |
| 008B | 1 | 1 | 1 | 1 | 013H067010 | Cap, Right |
| 009B | 1 | 1 | 1 | 1 | 013H067020 | Cap, Left |
| 011B | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3x8 |
| 012B | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3x8 |
| 020B | 1 | 1 | 1 | 1 | 013H064010 | Case |
| 021B | 1 | 1 | 1 | 1 | 013H861010 | Label |
| 022B | 1 | 1 | 1 | 1 | 013H277010 | Packing |
| 001D | 1 | 1 | 1 | 1 | 431H257010 | Lid, Top Cover Gold |
| 002D | | 4 | 4 | 4 | 51706009U0 | Spec. Set Screw |
| 002D | 4 | | | | 51706009Z0 | Spec. Set Screw |
| 001F | | 1 | 1 | | 013H105010 | Chassis, Main |
| 001F | | | | 1 | 013H105040 | Chassis, Main |
| 001F | 1 | | | | 013H105030 | Chassis, Main |
| 002F | 4 | 4 | 4 | 4 | 415H057010 | Leg |
| 003F | 4 | 4 | 4 | 4 | 51280408B0 | B.H. Tapped Screw B4x8 |
| 005F | | 1 | 1 | | 013H120010 | Insulator, Main PWB |
| 006F | 1 | 1 | 1 | 1 | 013H160030 | Bracket, Main PWB |
| 007F | 1 | 1 | 1 | 1 | 51570306B0 | P. Tapped Screw P3x6 |
| 008F | 1 | 1 | 1 | 1 | 51280308B0 | B.H. Tapped Screw B3x6 |
| 010F | 1 | 1 | 1 | 1 | SP01010490 | Push Switch |
| 011F | 1 | 1 | 1 | 1 | 013H160020 | Bracket, Open SW |
| 012F | 2 | 2 | 2 | 2 | 51100305A9 | B.H.M. Screw B3x5 |
| 013F | 2 | 2 | 2 | 2 | 51570306B0 | P. Tapped Screw P3x6 |
| 015F | 1 | | | | 403H056010 | Buffer, AC Cord |
| 016F | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3x8 |
| 020F | 1 | 1 | 1 | 1 | 013H064020 | Case |
| 021F | 4 | 4 | 4 | 4 | 51570306B0 | P. Tapped Screw P3x6 |
| 024F | 1 | 1 | 1 | 1 | 013H109010 | Shield, Main PWB |
| 025F | 1 | 1 | 1 | 1 | 013H274010 | Reflector, LED |
| 030F | 1 | 1 | 1 | 1 | 51280308B0 | B.H. Tapped Screw B3x8 |
| 031F | | 2 | 2 | | 51500308B0 | F.H. Tapped Screw F3x8 |
| 035F | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3x8 |
| 036F | | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3x8 |
| 040F | 1 | | | 1 | 1455259090 | Bushing AC Cord |
| 044F | | 1 | 1 | | 4581861010 | Label Made in Japan |
| 045F | 1 | 1 | 1 | 1 | 2112265010 | Indicator Serial No. Label |
| 047F | 1 | | | | 105H861010 | Label 3 Year |
| 048F | 1 | | | | 2457861040 | Label CSA Canada |
| 001G | 1 | 1 | 1 | 1 | 013H160010 | Bracket, Front Chassis |
| 002G | 1 | 1 | 1 | 1 | 013H063020 | Escutcheon, Operation |
| 003G | 1 | 1 | 1 | 1 | 51280308B0 | B.H. Tapped Screw B3x8 |
| 005G | 1 | 1 | 1 | 1 | 013H158020 | Window, Operation |
| 006G | 1 | 1 | 1 | 1 | 013H158030 | Window, L.E.D. |
| 009G | 1 | 1 | 1 | 1 | 51280308B0 | B.H. Tapped Screw B3x8 |
| 010G | 1 | 1 | 1 | 1 | 51280308B0 | B.H. Tapped Screw B3x8 |
| 013G | 3 | 3 | 3 | 3 | 431H051020 | Guide, L.E.D. |
| 015G | 3 | 3 | 3 | 3 | 51570306B0 | P. Tapped Screw B3x6 |

| REF. DESIG. | Q'TY U | N | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|
| 001R | | 1 | 1 | 1 | 2911861020 | Label |
| 001R | 2 | | | | 117H861010 | Label |
| 002R | | 1 | 1 | 1 | 2911861110 | Label |
| 003R | 1 | | | | 9511101070 | Label UL |
| ⚠J021 | | 1 | 1 | | YJ04000850 | Jack, Outlet |
| ⚠J021 | 1 | | | 1 | YJ04000990 | Jack, Outlet |
| ⚠J022 | | 1 | 1 | | YJ04000850 | Jack, Outlet |
| ⚠J022 | 1 | | | 1 | YJ04000990 | Jack, Outlet |
| ⚠J023 | 1 | | | 1 | YJ04000990 | Jack, Outlet |
| ⚠J091 | | 1 | 1 | 1 | BY05060060 | Volt, Selector |
| ⚠J093 | | 1 | 1 | | YP04000610 | Plug |
| ⚠L001 | | 1 | 1 | 1 | TS14132180 | Power Transformer |
| ⚠L001 | 1 | | | | TS14132170 | Power Transformer |
| ⚠W001 | | | | 1 | YC01800200 | A.C. Power Cord |
| ⚠W001 | 1 | | | | YC01800260 | A.C. Power Cord |

## [H01-99] Packing Materials




| REF. DESIG. | Q'TY U | N | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|
| | | | | | | **PACKING** |
| 001S | | 1 | 1 | | 013H801020 | Packing Case |
| 001S | 1 | | | | 013H801010 | Packing Case |
| 002S | 2 | 2 | 2 | 2 | 431H809010 | Cushion |
| 003S | 1 | 1 | 1 | 1 | 9090808030 | Polyethy Sheet |
| 004S | | | 4 | | 9526019030 | Serial No. Card |
| 004S | | 4 | | | 9526019060 | Serial No. Card |
| 004S | | | | 4 | 9526019050 | Serial No. Card |
| 004S | 4 | | | | 9526019010 | Serial No. Card |
| 007S | | | | 1 | 013H801050 | Packing Case |
| 010S | 1 | | | 1 | 2918107390 | Sheet, AC Cord |
| 001T | | 1 | 1 | 1 | 013H851310 | Instructions |
| 001T | 1 | | | | 013H851210 | Instructions |
| 002T | | 1 | 1 | 1 | 013H851320 | Instructions, Spec. |
| 002T | 1 | | | | 013H851220 | Instructions, Spec. |
| 003T | | | 1 | | 9631000090 | Guarantee Card |
| 003T | | | | 1 | 416H854010 | Guarantee Card |
| 003T | 1 | | | | 103H854010 | Guarantee Card |
| 004T | | | | 1 | 3435851210 | Instructions |
| 004T | 1 | | | | 2225813010 | Envelope Sheet |
| 005T | | | | 1 | YJ04000240 | Jack |
| 901T | 1 | | | | 2818854040 | Guarantee Card (Canada) |
| 902T | 1 | | | | 9650000050 | S. Station Card (Canada) |
| W001 | | | 1 | | ZC02006030 | A.C. Power Cord |
| W001 | | 1 | | | ZC01805030 | A.C. Power Cord |
| W003 | 1 | 1 | 1 | 1 | ZD01000250 | Connective Cord |
| W004 | 3 | 3 | 3 | 3 | ZD00400080 | Connective Cord |

| REF. DESIG. | Q'TY U | N | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|
| | | | | | | **RMC-12 REMOTE CONTROL UNIT** |
| 001Z | 1 | 1 | 1 | 1 | 025H064010 | Case, Front |
| 002Z | 1 | 1 | 1 | 1 | 017H064020 | Case, Bottom |
| 003Z | 1 | 1 | 1 | 1 | 017H064030 | Case, Batt. |
| 004Z | 1 | 1 | 1 | 1 | 017H401010 | Frame, Front |
| 005Z | 1 | 1 | 1 | 1 | 017H158020 | Window, L.E.D. Lens |
| 006Z | 6 | 6 | 6 | 6 | 017H270010 | Button Push |
| 007Z | 1 | 1 | 1 | 1 | 025H127010 | Control Board |
| 008Z | 1 | 1 | 1 | 1 | 017H123010 | Contactor, Batt. Terminal (–) |
| 009Z | 1 | 1 | 1 | 1 | 017H123020 | Contactor, Batt. Terminal (+) |
| 010Z | 1 | 1 | 1 | 1 | 017H123030 | Contactor, Batt. Terminal (+–) |
| 012Z | 2 | 2 | 2 | 2 | 51402615R0 | B.H. Tapped Screw B2.6x15 |
| 013Z | 1 | 1 | 1 | 1 | 51420206R0 | O.C.H. Tapped Screw B2x6 |
| 014Z | 2 | 2 | 2 | 2 | 51302606B0 | P.H. Tapped Screw P2.6x6 |
| 015Z | 2 | 2 | 2 | 2 | 51302606B0 | P.H. Tapped Screw P2.6x6 |
| 016Z | 2 | 2 | 2 | 2 | 54042602N0 | Spring Washer |
| 017Z | 1 | 1 | 1 | 1 | 9011325010 | Polyethy Bag |
| 020Z | 1 | 1 | 1 | 1 | 017H270020 | Button System 1 |
| 021Z | 1 | 1 | 1 | 1 | 017H270030 | Button System 2 |
| 023Z | 1 | 1 | 1 | 1 | 4724056010 | Buffer, Batt. Lid |
| 025Z | 4 | 4 | 4 | 4 | 017H270040 | Button Up/Down |
| 026Z | 1 | 1 | 1 | 1 | 025H303010 | Mask |
| 027Z | 1 | 1 | 1 | 1 | 4581861010 | Label |



## 16. ELECTRICAL PARTS LIST

| REF. DESIG. | Q'TY U | N | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|
| | | | | | | **PU01-REMOTE DECODER & POWER SUPPLY** |
| PU01 | 1 | 1 | 1 | 1 | YK013H1410 | P.W. Board, Remote Decoder & Power Supply |
| | 1 | | | 1 | ZZ013H1410 | P.W. Board Assembly |
| | | 1 | 1 | | ZZ013H8410 | P.W. Board Assembly |
| | | | | | | **PU01-CAPACITORS** |
| CU01 | 1 | 1 | 1 | 1 | EA10801630 | Elect 1000μF 16V |
| CU02 | 1 | 1 | 1 | 1 | EA33703530 | Elect 330μF 35V |
| CU03 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1μF 50V |
| CU04 | 1 | 1 | 1 | 1 | EA22601630 | Elect 22μF 16V |
| CU05 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1μF 50V |
| CU06 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1μF 50V |
| CU07 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
| CU08 | 1 | 1 | 1 | 1 | DF16683310 | Film 0.068μF ±10% |
| CU09 | 1 | 1 | 1 | 1 | DF16683310 | Film 0.068μF ±10% |
| CU10 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04μF +80% −20% |
| CU11 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04μF +80% −20% |
| CU12 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04μF +80% −20% |
| CU13 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04μF +80% −20% |
| CU14 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| CU15 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| CU16 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
| CU17 | 1 | 1 | 1 | 1 | DK16102300 | Ceramic 0.001μF ±10% |
| CU18 | 1 | 1 | 1 | 1 | DF15332310 | Film 0.0033μF ±5% |
| CU19 | 1 | 1 | 1 | 1 | EA47601630 | Elect 47μF 16V |
| CU20 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
| CU21 | 1 | 1 | 1 | 1 | DF16333310 | Film 0.033μF ±10% |
| CU22 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
| CU23 | 1 | 1 | 1 | 1 | EA47505030 | Elect 4.7μF 50V |
| CU24 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04μF +80% −20% |
| CU25 | 1 | 1 | 1 | 1 | DD15121370 | Ceramic 120pF ±5% |
| CU26 | 1 | 1 | 1 | 1 | DD15471370 | Ceramic 470pF ±5% |
| | | | | | | **PU01-RESISTORS (All Resistors are ±5% & 1/4W)** |
| RU01 | 1 | 1 | 1 | 1 | NF02100140 | 10Ω, Fuseable |
| RU02 | 1 | 1 | 1 | 1 | GD05681140 | 680Ω |
| RU03 | 1 | 1 | 1 | 1 | GD05272140 | 2.7kΩ |
| RU05 | 1 | 1 | 1 | 1 | GD05010140 | 1Ω |
| RU06 | 1 | 1 | 1 | 1 | GD05010140 | 1Ω |
| RU07 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| RU08 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| RU09 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| RU10 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| RU11 | 1 | 1 | 1 | 1 | GD05681140 | 680Ω |
| RU12 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| RU13 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| RU14 | 1 | 1 | 1 | 1 | GD05681140 | 680Ω |
| RU15 | 1 | 1 | 1 | 1 | GD05681140 | 680Ω |
| RU16 | 1 | 1 | 1 | 1 | GD05564140 | 560kΩ |
| RU17 | 1 | 1 | 1 | 1 | GD05273140 | 27kΩ |
| RU18 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| RU19 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| RU20 | 1 | 1 | 1 | 1 | GD05222140 | 2.2kΩ |

| REF. DESIG. | Q'TY U | N | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|
| RU21 | 1 | 1 | 1 | 1 | GD05222140 | 2.2kΩ |
| RU22 | 1 | 1 | 1 | 1 | GD05222140 | 2.2kΩ |
| RU23 | 1 | 1 | 1 | 1 | GD05222140 | 2.2kΩ |
| RU24 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| RU25 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| RU26 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| RU27 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| RU28 | 1 | 1 | 1 | 1 | GD05332140 | 3.3kΩ |
| RU29 | 1 | 1 | 1 | 1 | GD05332140 | 3.3kΩ |
| RU30 | 1 | 1 | 1 | 1 | GD05681140 | 680Ω |
| RU31 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| RU32 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| RU33 | 1 | 1 | 1 | 1 | GD05473140 | 47kΩ |
| RU34 | 1 | 1 | 1 | 1 | GD05681140 | 680Ω |
| RU35 | 1 | 1 | 1 | 1 | GD05102140 | 1kΩ |
| RU36 | 1 | 1 | 1 | 1 | GD05154140 | 150kΩ |
| RU37 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| RU38 | 1 | 1 | 1 | 1 | GD05220140 | 22Ω |
| RU39 | 1 | 1 | 1 | 1 | GD05564140 | 560kΩ |
| RU40 | 1 | 1 | 1 | 1 | GD05102140 | 1kΩ |
| RU41 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| RU42 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| | | | | | | **PU01-SEMICONDUCTORS** |
| DU01 | 1 | 1 | 1 | 1 | HD20022030 | Diode DSF10C |
| DU02 | 1 | 1 | 1 | 1 | HD20022030 | Diode DSF10C |
| DU03 | 1 | 1 | 1 | 1 | HD20022030 | Diode DSF10C |
| DU04 | 1 | 1 | 1 | 1 | HD20022030 | Diode DSF10C |
| DU06 | 1 | 1 | 1 | 1 | HD30025020 | Zener MA2100B |
| DU07 | 1 | 1 | 1 | 1 | HD30015020 | Zener MA1240M |
| DU08 | 1 | 1 | 1 | 1 | HD30015020 | Zener MA1240M |
| DU09 | 1 | 1 | 1 | 1 | HD20001000 | Diode IS1555 |
| DU10 | 1 | 1 | 1 | 1 | HD20001000 | Diode IS1555 |
| DU11 | 1 | 1 | 1 | 1 | HD30007020 | Zener MA1091M |
| DU12 | 1 | 1 | 1 | 1 | HD30007020 | Zener MA1091M |
| QU01 | 1 | 1 | 1 | 1 | HT313181R0 | Transistor 2SC1318(R) |
| QU02 | 1 | 1 | 1 | 1 | HT313181R0 | Transistor 2SC1318(R) |
| QU03 | 1 | 1 | 1 | 1 | HC10084050 | IC TC9130P |
| QU04 | 1 | 1 | 1 | 1 | HT327852D0 | Transistor 2SC2785 (F or E) |
| QU05 | 1 | 1 | 1 | 1 | HT327852D0 | Transistor 2SC2785 (F or E) |
| QU06 | 1 | 1 | 1 | 1 | HT327852D0 | Transistor 2SC2785 (F or E) |
| QU07 | 1 | 1 | 1 | 1 | HT327852D0 | Transistor 2SC2785 (F or E) |
| QU08 | 1 | 1 | 1 | 1 | HT111752D0 | Transistor 2SA1175 (F or E) |
| QU09 | 1 | 1 | 1 | 1 | HT111752D0 | Transistor 2SA1175 (F or E) |
| QU10 | 1 | 1 | 1 | 1 | HT327852D0 | Transistor 2SC2785 (F or E) |
| QU11 | 1 | 1 | 1 | 1 | HI10011080 | L.E.D. SEL1213 Red |
| QU12 | 1 | 1 | 1 | 1 | HC10064060 | IC UPC1373H |
| QU13 | 1 | 1 | 1 | 1 | HC10071060 | IC UPC1373H |
| QU14 | 1 | 1 | 1 | 1 | HI60001060 | L.E.D. PH302 |
| QU15 | 1 | 1 | 1 | 1 | HT313181R0 | Transistor 2SC1318(R) |

| REF. DESIG. | Q'TY U | N | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|
| | | | | | | **PU01-MISCELLANEOUS** |
| ⚠LU01 | 1 | | | 1 | LY10240080 | Relay, System 1 Outlet |
| ⚠LU01 | | 1 | 1 | | LY10240090 | Relay, System 1 Outlet |
| ⚠LU02 | 1 | | | 1 | LY10240080 | Relay, System 2 Outlet |
| ⚠LU02 | | 1 | 1 | | LY10240090 | Relay, System 2 Outlet |
| LU03 | 1 | 1 | 1 | 1 | LA74020010 | Ant. Coil, 37.5kHz |
| WU01 | 1 | 1 | 1 | 1 | YU05300260 | 5P, 300 mm |
| WU02 | 1 | 1 | 1 | 1 | YU02120260 | 2P, 120 mm |
| WU03 | 1 | 1 | 1 | 1 | YU02100260 | 2P, 100 mm |
| XU01 | 1 | 1 | 1 | 1 | FQ04003010 | Seramic Vib., CSB400P 400kHz |
| | | | | | | **PW01-REMOTE OUTPUT JACK CIRCUIT BOARD** |
| PW01 | 1 | 1 | 1 | 1 | YK013H1420 | P.W. Board Remote Output Jack |
| | 1 | 1 | 1 | 1 | ZZ013H1420 | P.W. Board Assembly |
| JW01 | 1 | 1 | 1 | 1 | YT02020340 | Terminal Output Jack |
| | | | | | | **PY01-SWITCH & L.E.D. CIRCUIT BOARD** |
| PY01 | 1 | 1 | 1 | 1 | YK013H1430 | P.W. Board Switch & L.E.D. |
| | 1 | 1 | 1 | 1 | ZZ013H1430 | P.W. Board Assembly |
| QY01 | 1 | 1 | 1 | 1 | HI10052020 | L.E.D. LN250RPH Red |
| QY02 | 1 | 1 | 1 | 1 | HI10052020 | L.E.D. LN250RPH Red |
| SY01 | 1 | 1 | 1 | 1 | SP01010570 | Push Switch |
| SY02 | 1 | 1 | 1 | 1 | SP01010570 | Push Switch |
| | | | | | | **PZ01-POWER L.E.D. CIRCUIT BOARD** |
| PZ01 | 1 | 1 | 1 | 1 | YK013H1440 | P.W. Board Power L.E.D. |
| | 1 | 1 | 1 | 1 | ZZ013H1440 | P.W. Board Power L.E.D. |
| QZ01 | 1 | 1 | 1 | 1 | HI10052020 | L.E.D. LN250RPH Red |

| REF. DESIG. | Q'TY U | N | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|
| | | | | | | **REMOTE CONTROL TRANSMITTER (RMC-12)** |
| | | | | | | **PT00-AU CONTACT DUAL CIRCUIT BOARD** |
| PT00 | 1 | 1 | 1 | 1 | YF025H0010 | P.W. Board AU Contact Dual |
| | 1 | 1 | 1 | 1 | ZZ025H0010 | P.W. Board Assembly |
| | | | | | | **PT00-CAPACITORS** |
| CT01 | 1 | 1 | 1 | 1 | EA47405030 | Elect 0.47μF 50V |
| CT02 | 1 | 1 | 1 | 1 | DK16101300 | Ceramic 100pF ±10% |
| CT03 | 1 | 1 | 1 | 1 | DK16101300 | Ceramic 100pF ±10% |
| | | | | | | **PT00-RESISTORS** |
| RT01 | 1 | 1 | 1 | 1 | GD05102140 | Resistor, 1kΩ |
| RT02 | 1 | 1 | 1 | 1 | GD05018140 | Resistor, 1.8Ω |
| | | | | | | **PT00-SEMICONDUCTORS** |
| DT01 | 1 | 1 | 1 | 1 | HD20001000 | Diode IS1555 |
| DT02 | 1 | 1 | 1 | 1 | HD20001000 | Diode IS1555 |
| DT03 | 1 | 1 | 1 | 1 | HD20001000 | Diode IS1555 |
| DT04 | 1 | 1 | 1 | 1 | HD20001000 | Diode IS1555 |
| QT01 | 1 | 1 | 1 | 1 | HI10030020 | L.E.D., LN224RP Red |
| QT02 | 1 | 1 | 1 | 1 | HI20001060 | L.E.D., SE303A |
| QT03 | 1 | 1 | 1 | 1 | HI20001060 | L.E.D., SE303A |
| QT04 | 1 | 1 | 1 | 1 | HT320011K0 | Transistor |
| QT05 | 1 | 1 | 1 | 1 | HC10070060 | IC, UPD6102G |
| | | | | | | **PT00-MISCELLANEOUS** |
| ST01 | 1 | 1 | 1 | 1 | SS01020400 | Slide Switch |
| ST02 | 1 | 1 | 1 | 1 | SS02020810 | Slide Switch |
| FT01 | 1 | 1 | 1 | 1 | FQ04503010 | Seramic Vib. CSB450E |

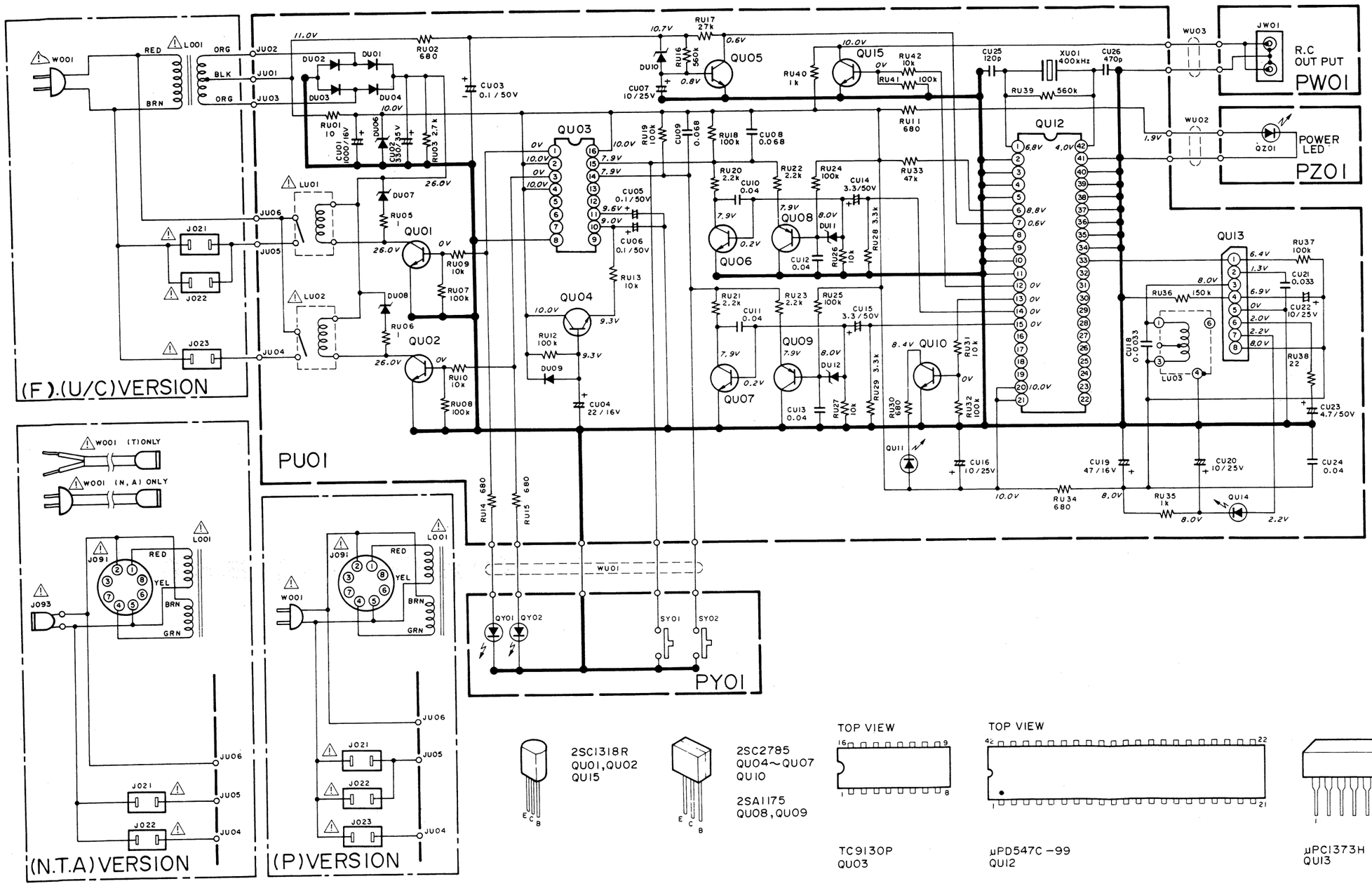
| | |
|---|---|
| (W01-99) | Assembly and Wiring |
| (T01-99) | Adjustment |
| (X01-00) | Correction |

**NOTE ON SAFETY:**
**Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may incresse risk of fire or electrical shock hazard.**

Memorandum

## 17. SCHEMATIC DIAGRAM

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DU01～DU04<br>HD2Z0022030<br>DSF 10C | DU06<br>HD30025020<br>MA2100B,10V | DU07, DU08<br>HD30015020<br>MA1240M,24V | DU09,DU10<br>HD20001000<br>1S1555 | DU11, DU12<br>HD30007020<br>MA109IM,9V | QU01, QU02<br>QU15<br>HT313181R0<br>2SC1318R | QU03<br>HC10084050<br>TC9130P | QU04～QU07<br>QU10<br>HT327852D0<br>2SC2785 | QU08,QU09<br>HT111752D0<br>2SA1175 | QU11<br>HI10011080<br>SEL1213C | QU12<br>HC10064060<br>μPD547C-99 | QU13<br>HC10071060<br>μPC1373H | QU14<br>HI60001060<br>PH302 | QY01,QY02<br>QZ01<br>HI10052020<br>LN250RPH |







**NOTE ON SAFETY:**
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

**Components and wiring are subject to change for modification without notice.**